1967

36th Report of the Committee on Curricular Affairs -- Course Changes and Curriculum Modifications in the College of Engineering

University of Rhode Island Faculty Senate

Serial Number 150

UNIVERSITY OF RHODE ISLAND

FACULTY SENATE

BILL

Adopted by the Faculty Senate

TO: President Francis H. Horn

FROM: Chairman of the Faculty Senate

1. The Attached BILL, titled 36th Report of the Committee on Curricular Affairs -- Course changes and Curriculum Modifications in the College of Engineering, is forwarded for your consideration.

2. The original and two copies for your use are included.

3. This BILL was adopted by vote of the Faculty Senate on February 16, 1967 (date).

4. After considering this bill, will you please indicate your approval or disapproval. Return the original or forward it to the Board of Trustees, completing the appropriate endorsement below.

5. In accordance with Section 8, paragraph 2 of the Senate's By-Laws, this bill will become effective on March 9, 1967 (date), three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; (3) you forward it to the Board of Trustees for their approval; or (4) the University Faculty petitions for a referendum. If the bill is forwarded to the Board of Trustees, it will not become effective until approved by the Board.

February 23, 1967
(date)

William R. Fenanto /s/
Chairman of the Faculty Senate

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ENDORSEMENT 1.

TO: Chairman of the Faculty Senate

FROM: President of the University

1. Returned. ✓

2. Approved _____. Disapproved _____.

3. (If approved) In my opinion, transmittal to the Board of Trustees is not necessary.

Feb. 24, 1967
(date)

Francis H. Horn /s/
President

Form approved 11/65 (over)

ALTERNATE ENDORSEMENT 1.

TO: Chairman of the Board of Trustees.

FROM: The University President

1. Forwarded.

2. Approved.

_____ _____/s/
(date) President

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ENDORSEMENT 2.

TO: Chairman of the Faculty Senate

FROM: Chairman of the Board of Trustees, via the University President.

1. Forwarded.

_____ _____/s/
(date)

_____
(Office)

- -

ENDORSEMENT 3.

TO: Chairman of the Faculty Senate

FROM: The University President

1. Forwarded from the Chairman of the Board of Trustees.

_____ _____/s/
(date) President

- -

Original received and forwarded to the Secretary of the Senate and Registrar for filing in the Archives of the University.

_____ _____/s/
(date) Chairman of the Faculty Senate

C. From the College of Engineering

1. Department of Chemical Engineering

Add (new):*

Ch. E. 134 (O.E. 134), Corrosion and Corrosion Control Sem. II, 3 cr.

Chemical nature of metals, electrochemical nature of corrosion. Types of corrosion, influence of environment, methods of corrosion control, behavior of engineering materials, all with special emphasis on the ocean environment. (Lec. 3) Prerequisite: Permission of instructor.

*Reported in error in Thirty-fifth Report as a designation change.

2. Department of Civil Engineering

a. Add (new):

C.E. 286, Physico-Chemical Properties of Soils Sem. I, 3 cr.

The influence of physico-chemical properties of soils on engineering characteristics and performance. Application of mineralogy, ion exchange and colloidal theory; effect of marine environment; and the nature of soil water. Prerequisites: C.E.80 or permission of the instructor.

3. Department of Electrical Engineering

E.E. 133, Electrical Engineering Materials Laboratory Sem. II, 1 cr.

Experimental course to supplement lecture courses E.E. 131 and 132. Involves crystal growth, film deposition, determination of electrical and optical properties, fabrication of elemental solid state devices and determination of their characteristics. This is a professional elective for students emphasizing solid state electronics in their program. (Lab. 3). Prerequisite: Credit or registration in E.E. 131 or equivalent.

4. Department of Industrial Engineering

a. Modify undergraduate curriculum to:

1) Delete the following as required courses:

Speech 1	Fundamentals of Oral Communication	3 credits
M.E. 23	Kinematics	3 credits
M.E. 31	Mechanical Engineering Laboratory	1 credit
C.E. 22	Mechanics of Materials Laboratory	1 credit
		8 credits

2) Reduce the total minimum credits for graduation in the curriculum from 142 credits to 134 credits.

3) Change the present requirement for Math 173 - Machine Aided Analysis, 3 credits, to permit the student a choice as follows:

C.S. 100, Introduction to Digital Computers	3 credits or
Math 173, Machine Aided Analysis	3 credits

b. Add (new):

I.E. 235, Industrial Reliability Engineering Sem. II, 3 cr.

Theories of reliability applicable to the design and operations of manufacturing processed and product quality assurance control system Quantitative analyses of economic specifications, performance levels maintenance levels, and redundancy systems. Prerequisite; Permission of the Instructor.

I.E. 240, Production Control and Inventory Systems Sem. 1, 3 cr.

Theory and practice of economic control of industrial inventory systems. A broad spectrum of mathematical models for static, dynamic, perpetual, and periodic inventory systems as they affect and relate to production. Prerequisite: Permission of the Instructor.

5. Department of Mechanical Engineering

a. Modify undergraduate curriculum (to begin with Class of 1970) as follows:

DEPARTMENT OF MECHANICAL ENGINEERING

Freshman Year

First Semester		Second Semester	
Chem. 1 or 3-General Chemistry	4	Chem. 10-General Chemistry	4
Engr. 1-Introduction to Engineering	1	C.S. 1-Digital Computation or	1
Engr. 2-Basic Graphics or	1	Engr. 2-Basic Graphics	
C.S. 1-Digital Computation		Engl. 2-Literature and Composition	3
Engl. 1-Composition	3	Hist. 4-History of Western Civilization since 1715	3
Hist. 3-History of Western Civilization to 1715	3	Math. 42-Intermediate Calculus with Analytic Geometry	3
Math. 41-Introductory Calculus with Analytic Geometry	3	M.E. 62-Statics	3
*M.S. 1-Military Science(optional)	1	*M.S. 2-Military Science (opt.)	1
Phys. Ed. 1M or 1W Physical Education	1	Phys. Ed. 2M or 2W Physical Education	1
	16-17		18-19

Sophomore Year

First Semester		Second Semester	
C.E. 21-Mechanics of Materials	3	M.E. 42-Mechanical Engineering Laboratory I	1
E.E. 10-Introduction to Electrical Engineering	3	E.E. 20-Electric Circuits, Measurements and Electronics	3
Math. 43-Calculus and Analytic Geometry of Several Variables	3	Math. 44-Differential Equations	3
M.E. 63-Dynamics	3	I.E. 30-Manufacturing Processes	2
*M.S. 23-Military Science(opt.)	1	Phys. 23-Introduction to Acoustics and Optics	3
Phys. Ed. 3M or 3W Physical Education	1	Econ. 23-Elements of Economics	3
Humanities Elective	3	*M.S. 24-Military Science(opt.)	1
	17	Phys. Ed. 4M or 4W Physical Education	1
			17

Junior Year

First Semester		Second Semester	
Ch.E. 32-Physical Metallurgy	3	M.E. 23-Kinematics	3
M.E. 43-Mechanical Engineering Laboratory II	1	M.E. 44-Mechanical Engineering Laboratory III	1
M.E. 51-Fundamentals of Thermodynamics	3	M.E. 52-Mechanical Engineering Thermodynamics	3
M.E. 72-Engineering Analysis	3	M.E. 54-Fluid Mechanics	3
Phys. 71-Modern Physics I	3	Math. 151-Introduction to Probability and Statistics	3
Social Science Elective	3	Humanities Elective	3
	16		16

Senior Year

First Semester		Second Semester	
M.E. 24-Design of Machine Elements	3	M.E. 46-Mechanical Engineering Laboratory V	1
M.E. 45-Mechanical Engineering Laboratory IV	1	M.E. 64-Vibration or	3
M.E. 55-Advanced Fluid Mechanics or	3	M.E. 128-Mechanical Control Systems	
M.E. 163-Intermediate Dynamics		M.E. 74-Comprehensive Design	3
M.E. 58-Heat and Mass Transfer	3	M.E. 76-Engineering Materials Science	3
Humanities Elective	3	Contemporary Problems	3
Professional Elective	3	Professional Elective	3
	16		16

Total Credits Required: 134

*All students not electing Military Science (no longer required), must substitute other courses earning the equivalent 4 credits before graduation.

b. Delete:

M.E. 41, Mechanical Engineering Laboratory — Sem. I, 1 cr.

M.E. 85, Aerodynamics — Sem. I, 3 cr.

M.E. 86, Aircraft Stress Analysis — Sem. II, 3 cr.

M.E. 156, Thermodynamics of Compressible Flow — Sem. I or II, 3 cr.

c. Change course numbers as follows:

M.E. 24 to M.E. 123 (24), Design of Machine Elements — Sem. I, 3 cr.

M.E. 35 to M.E. 135 (35), Power Plants — Sem. I, 3 cr.

M.E. 55 to M.E. 155 (55), Advanced Fluid Mechanics — Sem. II, 3 cr.

M.E. 58 to M.E. 158 (56), Heat and Mass Transfer — Sem. I, 3 cr.

M.E. 64 to M.E. 164 (64), Vibration — Sem. II, 3 cr.

M.E. 72 to M.E. 172 (72), Engineering Analysis — Sem. I, 3 cr.

M.E. 74, to M.E. 174 (74), Comprehensive Design — Sem. II, 3 cr.

M.E. 76 to M.E. 176 (76), Engineering Materials Science — Sem. II, 3 cr.